



Zone 5

Mathematics Implementation Report

2009-2010

Submitted by:

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Zone 5 Mathematics Implementation Project Report: 2009 – 2010

Project Goals

To develop and facilitate professional development opportunities which support the successful implementation of the new Alberta K-12 Mathematics Program of Studies.

Specifically –

- Provide opportunities which build teacher content knowledge for mathematics instruction
- Support the development of teachers' instructional strategies in mathematics
- Provide opportunities which develop teachers' capacity to understand student's mathematical thinking
- Support administrators as instructional leaders by offering opportunities which develop their understanding of the pedagogy of the new math curriculum

Executive Summary

Environmental Scan/Participant Needs Assessment:

Using a number of sources collected by the Calgary Regional Consortium over the past year, the CRC Math Advisory Committee was able to determine the needs in our area and develop goals for the next three years of implementation. We work with the understanding that our plan is a fluid one which allows us to monitor the effectiveness of our programming and is therefore responsive to any needs that may arise throughout the year.

CRC Mathematics Advisory Committee:

Purpose:

The role of the advisory committee includes the following: 1) Contribute to building the regional implementation plan. 2) Provide feedback regarding the plan as it develops. 3) To communicate the intent of the plan within our organizations. 4) Contribute to the plan's evidence of the success. 5) Make suggestion for future plans.

Members:

Deanna Robertson – Calgary Board of Education
Kathryn Scheurwater – Calgary Board of Education
Cheryl Schaub – Calgary Board of Education
April Fenton – Calgary Separate School Division
Dick McDougall – Calgary Separate School Division
Yvonne Machuck – Canadian Rockies Public Schools
Gary Chiste – Christ the Redeemer School Division
Doug Stevens – Foothills School Division
Tamara Golden – Golden Hills School Division
Vonda Chatterton – Prairie Land Regional Division
Kara Strobel – Prairie Land Regional Division
Kim Agnew – Rocky View School Division
Rosalind Carson – Rocky View School Division
Heather Hart – Trinity Christian School
Denise Budgen – Foundations for the Future Charter School
Dr. Olive Chapman – University of Calgary

Grant Background:

Alberta Education has provide the Calgary Regional Consortium with a three year Implementation Grant which includes funding to provide mathematics support for implementation of the new program of studies in our region. A condition of receiving this grant is that the CRC meets the grant deliverables as outlined by Alberta Education. Of the \$674 000.00 of implementation funding for the 2009-2010 school year, mathematics will receive \$404 400.00

Project Coordinator/Consultant (1.0 FTE) for 2009/2010 Report:

Debbie Ziegler is the Mathematics Coordinator/Consultant for the Calgary Regional Consortium. This is Debbie's second year in this role. Her previous role was mathematics teacher and school based administrator at the National Sport School with the Calgary Board of Education (CBE). In this role she taught high school mathematics and was charged with building out a school based professional development plan that supported teaching and learning in a blended environment. She also provided system support for high school teachers within the CBE on a part time basis. She represented the CBE on several Alberta Education projects supporting the development of the new Mathematics Curriculum and has facilitated study groups, workshops and other learning opportunities for teachers outside of the CBE. Debbie completed her Master of Science degree in secondary mathematics and her research focused on understanding teacher change.

In her role, Debbie facilitated professional development, assisted stakeholders and developed mathematics leadership capacity. She acted as liaison between the members of the advisory committee and all stakeholders. She communicated and collaborated with Dr. Jean Hoeft, Executive Director of the CRC. Her goal was to develop leadership capacity in the area of mathematics and to help teachers bring effective and innovative teaching practices into the classroom that are reflective of the new Alberta K-12 Mathematics Program of Studies.

Overarching Goal:

To facilitate professional development opportunities which support the successful implementation of the new Alberta Mathematics Program of Studies K-12.

Goal #1:

Enhance the support provided to mathematics teachers.

Context:

"... in the mid-1980's was a movement called Cognitively Guided Instruction – the premise is that if teachers truly understand children's thinking in solving problems related to the topic being addressed, they will be better able to make the mathematics make sense to their students. A paper (Hill, Rowan, Ball, 2005) speaks to the effectiveness of looking at teachers' pedagogical content knowledge as a tool to improve student performance."

(Making Math Meaningful - Marian Small, 2008)

Strategy 1:1

Continue to support 'Practical Mentors/Coaches' (from Forgarty/Pete – Spheres of Influence) by building their math content knowledge as a means to assist them in their work of supporting colleagues.

Indicators

- Book clubs/Study groups
- 'Expert' workshops
- School Jurisdiction support – developing leadership capacity

Source of Evidence

- ARPDC session evaluation forms
- Interviews with math leaders (appendix)
- Advisory committee year-end feedback (appendix)

Year End Report and Reflection on Lessons Learned

The Calgary Regional Consortium Math Advisory Committee made a conscious decision this year to continue supporting the development of mathematics leaders in their school jurisdictions. Math implementation money was budgeted to include training and support for these leaders in order to build their leadership capacity in mathematics. This money was less than the previous year, recognizing that a group of leaders were developed in the previous year. Jurisdictional leaders were identified by members of the Math Advisory Committee. They were selected for their willingness to be part of a cohort and their interest to work with a fundamental understanding of the pedagogy of the new curriculum. Money was put aside for each jurisdiction to support these teachers so that they could commit to opportunities offered through CRC.

Feedback from Advisory committee:

Zone 5 math leaders identified that intense (multi-day) and/or multiple math sessions were the key to increasing their mathematics knowledge and therefore made them feel more confident sharing with colleagues.

The top five methods in which these leaders were able to share their knowledge with colleagues were – Informal Conversations, Staff Meetings, Team Meetings, Coaching/Mentoring, and Organized School-based PD. Out of those, leaders felt that the most effective methods of sharing were coaching/mentoring, team meetings and planned conversations.

"I found that the staff meeting 'mini in-service' started people thinking. They then asked informally which lead to a formal conversation. That progresses to me checking up on them and offering additional ideas, etc. It was a chain reaction."

The identified jurisdictional leaders were supported in the development of cohorts (they met on several occasions with the expectation that they share back their experiences). Specifically, the Technology for 10C cohort participants were interviewed and shared how they planned on sharing what they had learned.

“ I can’t wait to share what I have learned with my staff. This has been an amazing experience and I wished by whole department could have participated. But I will share.”

A book study was tried with Karen Hume’s book, Evidence to Action. It was moderately successful. A decision was made to pursue the book study within the Advisory group since very few teachers were interested in participating. We only had 3 teachers attend the scheduled meetings.

In conclusion – survey participants felt that CRC plays a crucial role in supporting teacher leaders and consultants. They were very pleased with the variety of leadership opportunities provided for them.

Strategy 1:2

Offer Marilyn Burn’s Math Solutions five day summer course – “About Teaching Mathematics” Part 1 (K to 8) and Building a Foundation for Algebra (K to 8)

Indicators	Source of Evidence
<ul style="list-style-type: none"> • Participant satisfaction • Sharing their learning/implementation of strategies • 	<ul style="list-style-type: none"> • Math Solutions feedback forms (see appendix) • Advisory committee year-end feedback •

Year End Report and Reflection on Lessons Learned

This five day workshop was attended by math teachers, curriculum leaders and administrators. It was offered in two parts. Part 1 focused on understanding the K – 6 mathematics curriculum and what’s needed to teach it effectively. Teachers learned how to develop students’ abilities to think and reason; build students’ number sense, computation, and problem-solving skills; and organize instruction for whole-class, small-group, and individual learning. Course instructors with extensive classroom experience addressed specific grade-level needs.

A decision was made to offer a new opportunity for teachers called, *Building a Foundation for Algebra* (K to 8). It addressed the mathematical content and instructional strategies necessary for developing students’ algebraic thinking. Participants explored what is meant by algebraic thinking and how algebraic concepts can be applied at various grade levels. This course was offered to extend an invitation for those who have attended previous Math Solution courses and were interested in expanding their understanding specific to mathematical content. This course helped the participants:

- strengthen their math content knowledge for the purpose of making math accessible for students;
- understand how students learn mathematics; and
- implement instructional strategies that promote students’ understanding of equivalence, patterns and functions, variables, and graphing.

Share a success story . . .

"This course has provided me with a deeper understanding of how to make significant changes to my teaching practice. I will use this experience to look for a variety of ways to look/think about math instruction. I feel I am on the edge of a paradigm shift. Thank you!!"

"The whole week was filled with activities that kept us engaged! It helped show us what a meaningful classroom experience should look/feel like for students."

"Thank you! Not only did my math skills resurface (from long ago I might add), but it made me get excited about teaching my students about mathematics (new term for me). My classroom is a very busy, somewhat crazy at times – really because of me, so this approach fits perfect! First time in awhile I have been excited to start the year – the course was offered at a perfect time."

"Loved it, can't say enough..."

- The group approach encouraged true collaboration
- The problems and facilitation promoted true mathematical understanding
- The facilitators answered questions well
- The material was so valid. It would be nice to have mini charts related to help me remember some concepts

The workshop was excellent – the best PD I've done in 16 years of teaching."

Please see the appendix for complete feedback.

Overarching Goal:

To facilitate professional development opportunities which support the successful implementation of the new Alberta Mathematics Program of Studies K-12.

Goal #2:

Support the development of teachers' instructional strategies in mathematics.

Context:

"One of the complexities of mathematics teaching is that it must balance purposeful, planned classroom lessons with the ongoing decision making that inevitably occurs as teachers and students encounter unanticipated discoveries or difficulties that lead them into uncharted territory. Teaching mathematics well involves creating, enriching, maintaining, and adapting instruction to move toward mathematical goals, capture and sustain interest, and engage students in building mathematical understanding."
(NCTM, Principles and Standards, 2005)

Strategy 2:1

Provide implementation support through a variety of professional learning opportunities focused on developing teachers' instructional strategies in mathematics.

Indicators	Source of Evidence
<ul style="list-style-type: none">Alberta Ed. Elementary workshop series – both in French & EnglishDiverse PD sessions based on key instructional strategiesDevelopment of Middle/High school professional learning opportunities (partnership with the University of Calgary)	<ul style="list-style-type: none">ARPDC session evaluation formsExit cards – during series

Year End Report and Reflection on Lessons Learned

Over the past year, CRC offered a variety of professional learning opportunities to teachers to support implementation of the new mathematics Program of Studies. These opportunities ranged from sessions which introduced participants to the pedagogy of the new curriculum to opportunities which supported teachers currently implementing the new curriculum. A number of the opportunities created were multi-session which immersed teachers into various components of the new curriculum (an effort to move away from 'one shot' PD). Cohorts were developed for several of the pd opportunities. Teachers went through an application process to be part of these groups. An expectation existed for these teachers to develop their leadership skills. They were encouraged to 'give back' to the math community by presenting their experiences and understandings through conventions, presentations (formal, or informal). Some of the participants will be running CRC sponsored session in the 10/11 school year.

Evidence that effective implementation is occurring is a challenge to gather at this level of professional development support. We look to the conversations teachers are having while attending session – are they showing an awareness of the curricular outcomes, do their discussions reflect a deepening understanding of the pedagogy, are they able to share specific 'stories' from classroom experiences, and are they asking for further support which reflects their need for deepening their own understanding of what the curriculum is asking of them. Teachers were interviewed and taped during the cohort sessions. In order to share these interviews and artifacts, the CRC has set up a wiki to house this information. ***provide access information****

Lessons Learned –

In a discussion with the CRC Math Advisory Committee we felt it would be beneficial to have sessions offered in 2009/10 that met the needs of participants at three levels. There is still a need for introductory type sessions, which have participants becoming familiar with the pedagogy of the new curriculum as well as the outcomes at their grade levels. The second level of support will be for those teachers who are currently implementing and wish to address specific aspects of implementation. Some of the requests include; more on teaching through problem solving, using manipulatives, assessment, differentiation and planning for effective instruction (from ARPDC feedback forms). The third level of support needed is for the early adopters and/or teacher leaders. These are professionals that have been living and breathing the new curriculum for a while. The 10C Cohort session was developed to address these learners

Strategy 2:2

Work collaboratively with the ARPDC Math Consultants to develop and facilitate two High School Math Institutes (January and June).

Indicators	Source of Evidence
<ul style="list-style-type: none">Institutes were attended by high school math teachersSessions were developed using technologies to support a distributed learning model.	<ul style="list-style-type: none">ARPDC session evaluation formsFeedback summary (appendix)
<ul style="list-style-type: none">Teachers attend follow-up CRC 2009 136 webinars	<ul style="list-style-type: none">ARPDC session evaluation formsMoodle discussions

Year End Report and Reflection on Lessons Learned

January 25th Institute: ***Seeing the World Mathematically! Math for all Students***

Highlights

- 13 video conference sites across Alberta
- face-to-face site was Calgary
- over 600 participants; including administrators and teachers (over 178 at the Calgary site)
- a collaborative effort by Math Consultants and Distributed Learning Consultants from all of the consortia
- two follow-up webinars with Dr. Peter Liljedahl and 40 math teachers across the province



"This is quite simply the best pd I have ever received. Thank you."

ARPD Evaluation feedback

Calgary Participant

June Institute: ***Seeing the World Mathematically! Math for all Students***

- new technology – Webcasting (internet based technology) – worked very well.

- F2f site was Edmonton
- 95 teachers in Calgary – lower participation rate across the province
- the feedback was again very positive

The follow-up webinars were very well attended and very productive. These webinars encouraged teachers to go further. They were asked to experiment with a problem set introduced at the f2f Jan. 25th meeting.

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Building a Culture of Thinking - the April and May Webinars

- [Archived Recording of April 13 - Building a Culture of Thinking](#)
- [Archived Recording of May 4 - Building a Culture of Thinking session 2](#)
- [Peter's Slides from Webinar - April 13](#)
- [Peter's Slides from Webinar - May 4](#)
- [Math Problem Set - April 13](#)
- [Discussion follow-up to Peter's first webinar](#)
- [Where can we find great problems to use?](#)
- [Video tour of how to add a posting to our Discussion](#)
- [A cool video about making math \(and thinking\) real](#)
- [Link to Dan Meyer's Blog \(see video above\)](#)



Math Consultants and Coordinators from all consortia meet regularly to plan and then debrief the provincial Math Institutes. As a result of this need to work collaboratively, a provincial Math Moodle site was developed by Debbie Ziegler and Wanda Dechant (Learning Network). It provided a model for working collaboratively in an online environment. ARPD math consultants will continue to explore ways that they can work together.

Overarching Goal:

To facilitate professional development opportunities which support the successful implementation of the new Alberta Mathematics Program of Studies K-12.

Goal #3:

Provide opportunities that develop teachers' capacity to understand student's mathematical thinking.

Context:

"... teachers' knowledge is paramount in collecting useful information and drawing valid inferences. Teachers must understand their mathematical goals deeply, they must understand how their students may be thinking about mathematics, they must have a good grasp of possible means of assessing student's knowledge, and they must be skilled in interpreting assessment information from multiple sources. For teachers to attain the necessary knowledge, assessment must become a major focus in teacher preparation and professional development."

(NCTM, Principles and Standards, 2005)

Strategy 3:1

Continue to provide professional learning opportunities which support FOR, AS, and OF assessment practices in mathematics.

Indicators

- Math Assessment workshops

Source of Evidence

- ARPDC session evaluation forms

Year End Report and Reflection on Lessons Learned

CRC was able to offer two assessment specific sessions to participants this year. The feedback for both sessions was positive, but teachers are still searching for specific assessment tools to use in their classrooms. It is our belief that teachers are just starting to appreciate the role of assessment in instruction and this will be a focus for the 10/11 school year.

The CRC Math Advisory Committee had recommended that assessment become integrated into math sessions being provided to teachers. The hope was that assessment tools/resources currently being developed by Alberta Education and AAC could help support teachers in this area. This is definitely an area that needs continued support. There has not been documents developed or programs from Alberta Education or AAC. In response, this will be a focus for the 10/11 school year. The Math Advisory Committee believes that the time is right for this pd support.

Overarching Goal:

To facilitate professional development opportunities which support the successful implementation of the new Alberta Mathematics Program of Studies K-12.

Goal #4:

Support administrators as instructional leaders by offering opportunities which develop their understanding of the pedagogy of the new math curriculum.

Context:

"Student achievement in mathematics is unlikely to improve significantly beyond current local, regional, state, national or provincial levels until mathematics education leaders assume and exercise professional responsibility and accountability for their own practice and the practice of the teachers they lead. Leadership matters. A single mathematics education leader can have an incredible impact on the development and effectiveness of others."

(National Council of Supervisors of Mathematics, 2008)

Strategy 4:1

Provide a selection of administrator specific math professional learning resources/opportunities which support their role as instructional leaders in their jurisdictions.

Indicators	Source of Evidence
<ul style="list-style-type: none">• Workshop on SAPDC's Math Administrators Tool Kit	<ul style="list-style-type: none">• Requests for these opportunities
<ul style="list-style-type: none">• Sessions	<ul style="list-style-type: none">• ARPDC session evaluation forms
<ul style="list-style-type: none">•	<ul style="list-style-type: none">•

Year End Report and Reflection on Lessons Learned

This will be an area of focus for the 2010-11 school year. The development of the *Math Administrators Tool Kit* was pushed back again and is now scheduled for release in the fall of 2010.

Several sessions were offered last year with both Dr. David Decoste and Steve Leinwand presenting. There were requests made in the spring to offer more sessions for the 2010 2011 year. Those sessions will focus on helping administrators identify what the new mathematics classroom should look like and how they can support teachers interested in changing practice.

Review of Work Completed in 2009/2010

MATH

Program Date	Program Title & Presenter	Number of Registrants	Comments
Sept 22, 2009	Alberta Education - Revised Program of Studies for 10-12 Mathematics	40	<ul style="list-style-type: none"> - thank you. - We need to do more or this.
Sep 29, 2009 Oct 08, 2009 Oct 29, 2009 Nov 12, 2009	Combined 10 Math - What Were They Thinking?	53	<ul style="list-style-type: none"> -look for problems that lend itself to cooperative, interactive solving, reduce professional isolation - posing less questions but of higher depth - try relevant problems at the start of classes - use more practical problems first -to look for more carefully at the assessment practice at our schools and provide PD opportunities to engage in PLC work - continually question my own assessment techniques - attempt to 'evolve' better assessments - ask students to write unit test questions - reflect on my practices and encourage other colleagues to wake up and bring math to life - I have a lot of ideas to look at different way to each math and I think that would work in an AP class bu7t maybe not an applied class - to try & introduce more problem solving. Hopefully the new curriculum will allow us to do this.
Sept 30, 2009	Exclusively for Administrators - Supporting Math Implementation in Your School	52	<ul style="list-style-type: none"> - this was incredible. A great look into what the new curriculum should look like.
Oct 06, 2009 Nov 03, 2009 Dec 08, 2009 Jan 12, 2010 Feb 02, 2010	Building Math Concepts for the Classroom	31	<ul style="list-style-type: none"> -integration of manipulatives into the teaching of each strand -Encouraging my students to share their thinking and strategies more often, implementing more differentiation -more student discover
Oct 26, 2009 Oct 27, 2009	Great Ways to Differentiate Mathematics Instruction with Dr. Marian Small (Gr. 7-9)	32	<ul style="list-style-type: none"> -I will be able to address so many different learners! I can create a positive experience for each of my students -offering choices. It's a great way to challenge students and support those students who need more support / instruction. It also models how students can challenge themselves -incorporate strategies such as open "openers" more parallels - consolidators
Oct 28, 2009 Oct 29, 2009	Great Ways to Differentiate Mathematics Instruction with Dr. Marian Small (Gr. 4-6)	56	<ul style="list-style-type: none"> -to begin to implement some of Marian's ideas and strategies until I become comfortable and then bring it into my practice full time -I will attempt to create more open ended questions for my students. Create more entry points so that all students can feel successful. -Support teachers in differentiating by suggesting open-ended tasks that can be paralleled to meet individual needs, as opposed to 1 task for all
Oct 29, 2009	Assessment Math 10 – Why	54	<ul style="list-style-type: none"> -to look more carefully at the assessment practice at

Program Date	Program Title & Presenter	Number of Registrants	Comments
	Change		our schools and provide PD opportunities to engage in PLC work. -continually question my own assessment techniques – attempt to ‘evolve’ better assessments -ask students to write unit test questions
Nov 13, 2009 Nov 14, 2009	Developing Conceptual Thinking and Understanding in Geometry & Algebra (Gr. 7-9)	17	
Nov 19, 2009	Using SMART boards in the Math Classroom (K-3)	24	-think deeper about authentic lesson plans -I am now aware of available sites and software. I will start planning to use new sites - Interactive Student Activities using the SMART board - continued work on using SMART board technology
Nov 26, 2009	Using SMART boards in the Math Classroom (Gr. 4-6)	14	-the ability to create my own notebook lessons & I will let my students explore on Notebook -to use the resources we saw into my math lessons and join “future” classes to learn more about Smartboard -I will be braver and take more risks in the classroom
Nov 27, 2009	Gr. 6 Math PAT's (AM)	35	-Be intentional about connecting problems with strands – Sos and levels of complexity – focus more on using pictures etc. -That I will continue to question my students about their thinking rather than worrying about the answer. -I will look at teaching a more integrated process rather than knowledge – process - communication
Nov 27, 2009	Gr. 9 Math PAT's (PM)	27	-Teachers in a district need feedback on the terms and practices behind the construction of the PAT. This session was helpful in delivering this message. Thank you. -Prepare this year's grade 8 math students learning via continued use of visuals / manipulative -I was very interested in categorizing by complexity of questions rather than by category.
Dec 14, 2009	What are the Mathematical Processes and Why are They Important in the New Math 9-10 Curriculum?	7	- webinar
Jan 13, 2010 Jan 14, 2010	K-3 Young Mathematicians At Work	42	-to use more hands on counting, open number line and conferencing in my math lesson -focus on having more investigation and supporting student exploration of mathematics -focusing more on using 5 structures
Jan 15, 2010 Jan 16, 2010	Gr. 4-6 Young Mathematicians At Work	34	-to continue to reach for the deeper understanding of math, which I struggled with for x and division; it is not a series of steps to take to reach an answer. We will be looking at mini-lessons of doubling starting Monday and will grow from there. -Is to work with more investigations – as many outcomes arise – you're also honoring student thinking and it becomes a springboard for new mathematical thinking -string together group mini lessons
Jan 25, 2010	Calgary VC location: Provincial Mathematics	180	See appendix

Program Date	Program Title & Presenter	Number of Registrants	Comments
	Institute 2010 (Gr. 9-12)		

Jan 25, 2010	Airdrie VC location: Provincial Mathematics Institute 2010 (Gr. 9-12)	18	-focusing on whether any students are engaged in thinking or not -focus on 7 principles that Peter talked about both on instruction / assessment level -explorative activities for students to problem solve in groups and discover patterns / relations
Jan 25, 2010	High River VC location: Provincial Mathematics Institute 2010 (Gr. 9-12)	13	
Jan 27, 2010	Resource Preview and Planning Session for the 10C	101	-I will incorporate more group work into my teaching to get students more engaged -will use technology more – if our school can find the funds for SMARTboards. Also all the student online features are excellent
Feb 03, 2010 Feb 17, 2010 Mar 24, 2010	Using SMART boards in the K-6 Math Classroom	21	-Continue to find & implement interactive student lessons. -Not be afraid to explore and play with all the functions so then I can let the students do the same. -Sessions were great as they were very hands on and there was lots of time to actually create and apply learning.
Feb 26, 2010 Feb 27, 2010 Mar 12, 2010 Mar 13, 2010	Infusing Technology into the New 10C Math Curriculum	19	-integrating more diverse assessment tasks -introduce manipulatives in teaching factoring -students will not be consumers of information, they will be having ownership of knowledge -more technology, I have a number of places to go to try new ways of summarizing and presenting info
Mar 09, 2010	Power of Ten, Div I	63	-I was very impressed and very pleased with the information presented. The information and techniques that I learned will change the way I teach and think about math. -I'm going to implement what I can for the rest of this year and then plan over the summer for next year's teaching assignment using Power of Ten throughout the entire year. I had been apprehensive to do this before but now I feel confident that I will cover the entire curriculum and that the children will understand numbers and math far better than they do with my current teaching practice. -Strategies cards from website as well as looking at the website. This is my 4 th time seeing Trevor and I learn something new everytime. I have passed on my materials to the student teachers to improve their practice.
Mar 15, 2010 Mar 16, 2010	Grade 6 & 9 Math PAT Item Writing Workshop	47	-begin writing exams with a variety of levels of questions -types of questions I will ask, using their wrong answers to help me improve the way I teach -to draft PAT style questions for student discussion and group work
Mar 19, 2010	(AM Session) Provincial Assessment for the Revised Grade 3 Mathematics Program	71	-I realize how much I need to learn about the new curriculum. I thought I was in a good place -I will focus more than I already am on explaining the answer in different ways -ensure students explain answers

Mar 19, 2010	(PM Session) Provincial Assessment for the Revised Grade 3 Mathematics Program	72	<ul style="list-style-type: none"> -incorporate word problems everyday, not just my math block, best during meetings, journal writing, etc, -integrating math into other areas of curriculum -focus on different strands more extensively
Mar 25, 2010	Mathematics 10-3: Get your Hands On It	43	<ul style="list-style-type: none"> -implement the math-to-self, math-to-world and math-to-math -Looking at more projects, do and make connections for kids
Apr 14, 2010	Good Math Problems	24	<ul style="list-style-type: none"> -set more time aside for thoughtful problem solving -include games / problems that are challenging or even impossible -do more unsolved problems and games with strategy involved with my class
Apr 15, 2010	Using SMART boards in the 6-8 Math Classroom	20	<ul style="list-style-type: none"> -A positive supportive presentation that not only increased my knowledge of SMARTboards but challenged and excited me to give it a try -to not be afraid to just try the SMARTboard out and let the kids lead, not so much me -having students create SMARTboard lessons and exemplars
Apr 16, 2010	(AM Session) Provincial Assessment for the Revised Grade 3 Mathematics Program (REPEAT)	25	<p>I have more of an idea of what I can expect on the PAT and what further steps I need to take to assist my students.</p> <ul style="list-style-type: none"> -I will be better equipped to make sure my grade 3s are ready for this year's PAT -continue use of problem solving across the various strands -to ask students to <u>show</u> their work. Everytime!
Apr 16, 2010	(PM Session) Provincial Assessment for the Revised Grade 3 Mathematics Program (REPEAT)	16	<ul style="list-style-type: none"> -leading my staff in changing practice and understanding the philosophy and underpinnings of the new POS, I've been an assessment LL in the past with AISI so, although this info was great I've worked in this area before -Attempt to teach concepts in a more synthesized way rather than compartmentalizing them as much -ask the students to explain their answers to others more often, get them to justify
Apr 16, 2010	Grade 6 Math PAT's (REPEAT from Nov 27, 2009)	26	<ul style="list-style-type: none"> -Being new to Alberta it provided me with a better understanding of the PATs. I will be able to take this knowledge with me and will be able to integrate -integrating strands when giving problems, multi leveled problems using a variety of skills -Find better problems to increase student familiarity with numeric response type questions
Apr 16, 2010	Grade 9 Math PAT's (REPEAT from Nov 27, 2009)	30	<ul style="list-style-type: none"> -This is my first year teaching / living in Alberta and wanted to have greater awareness (in general) of the PAT. This was accomplished -to get more involved at the creation / committee level so my input is constructive rather than reflective -even more focus on conceptual understanding, including cross-strand assessments
Apr 21, 2010	Good Math Problems (REPEAT from April 14, 2010)	37	<ul style="list-style-type: none"> -incorporate more games, open-ended problems and look for problems that differentiate learning -provide students with a wide range of problems that will have entry points for all learners -looking for good problems to challenge all my students. Thank you, it was exactly what I was looking for.

Apr 28, 2010 May 5, 2010	Geogebra in the Math Classroom (Webinar)	7	
Apr 29, 2010	SMARTboards in the New 9 and 10C Math Classroom	24	-expand the variety and complexity of my SMART lessons -Take advantage of the gallery pictures and interactive media -Get the students involved in using this technology
May 31, 2010	Great Ways to Differentiate Secondary Math Instruction with Dr. Marian Small	60	-including all students in discussions using open questions. Next year's curriculum is perfect for this. -changing my questions to allow all different entry points for all my students -encourage students to share their thoughts more... provide "open" questions / problems
June 22, 2010	Provincial Math Institute (Calgary location)	92	-prepare lessons that will engage students in thinking cooperatively on a regular bases (daily), don't give students all the notes, encourage them to discover concepts -include more critical thinking type of questions in class -will try an upside-down lesson, will use the triangular #'s problem
June 22, 2010	Provincial Math Institute (Airdrie location)	16	-more of this is needed
June 22, 2010	Provincial Math Institute (High River location)	8	-technology worked great -you got me thinking.
June 26, 2010	Help! I'm Teaching Math 10C in September	23	-Use more open-ended questions and use the web-sites -try different teaching strategies. I will move from direct instruction to inquiry based learning
Aug 23-27, 2010	Math Solutions: Introduction	73	See attached
Aug 23-27, 2010	Math Solutions: Algebra	37	See attached
Aug 23-27, 2010	Texas Instruments – Calculator Workshop	22	(Texas Instrument did not forward feedback)

CALGARY REGIONAL CONSORTIUM

MATHEMATICS STATEMENT OF INCOME AND EXPENSES AS AT AUGUST 31, 2010	
REVENUE:	
AB MATH GRANT 2009-2010	\$ 404,000.00
BALANCE C'FWD 2008-2009: (For DL)	\$ 35,393.00
Registrations	\$ 134,013.24
TOTAL REVENUE:	\$ 573,406.24
EXPENSES:	
REGISTRATION SERVICES: (\$500/day - \$250/cancel)	\$ 28,000.00
COORDINATION SERVICES: (10%/yr/Grant)	\$ 40,400.00
Total Registration & Coordination	\$ 68,400.00
OPEN REGISTRATION SESSIONS:	
Alberta Education	\$ 10,344.83
Combined 10 Math - what were they thinking?	\$ 16,417.39
Administrator Session - Steve Leinwand	\$ 9,310.01
Great Ways /Prog Guide - Marian Small	\$ 29,882.85
Good Problems 2 pt series (Gord Hamilton)	\$ 3,391.44
Geogebra	\$ 600.00
Building Math Concepts - Tracey & April	\$ 12,076.91
Middle School Workshop - Trevor Brown	\$ 3,544.26
SMARTboards in the Math Classroom (4 days)	\$ 6,058.99
Young Mathematicians a Work - C Fosnot (4 days)	\$ 43,791.15
Power of Ten - T Calkin	\$ 11,110.09
Institutes Jan/June 2010-Peter + 2pt Webinar	\$ 36,680.26
Publisher Events	\$ 5,883.15
Math Solutions	\$ 97,576.14
Total Open Registrations	\$ 286,667.47
LEADERSHIP COHORTS/SPECIAL PROJECTS:	
MCATA	\$ 1,623.53
Book Club	2,000.00
Marion Small prog guide May14 subs	
Jurisdiction Support/Cohort	\$ 53,941.85
David Decoste Admin Supp Jurisdictional	\$ 4,025.80
Infusing Technology	\$ 14,900.00
Total Leadership	\$ 76,491.18
PROFESSIONAL RESOURCES (Text & Digital)	\$ 1,128.67
PROF RESOURCES *MOODLE	\$ 1,886.32
*DEBBIE PRESENTATIONS	\$ 2,854.92
ADVISORY COMMITTEE MEETINGS	\$ 4,096.07
ADMINISTRATION COSTS: (including Coordinator Salary & Benefits)	\$ 130,260.63
TOTAL EXPENSE:	\$ 571,785.26
BALANCE :	\$ 1,620.98

APPENDICES